



BURRELL-3.0-012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:  
James W. Burrell IV

Serial No. 10/071,952

Filed: February 7, 2002

For: VIRTUAL KEYBOARD AND  
CONTROL MEANS

Group Art Unit: 2854

Examiner: Charles H. Nolan, Jr.

December 19, 2002

TECHNOLOGY CENTER 2800  
DEC 30 2002

RECEIVED  
1-9-03  
Spruett

2854  
#7/Response

Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as  
first class mail in an envelope addressed to: Com-  
missioner of Patents and Trademarks, Washington,  
D.C. 20231 on 12-19-02

Judith M. Dainoff  
(Date of Deposit)  
Date 12-19-02

REPLY

Sir:

This is in response to the Office Action dated June 13, 2002.

**Information Disclosure Statement**

1. The listing of references in the specification is necessary in this and any other patent applications filed by the inventor because the U.S. Patent Office fails to include all prior art references in issued patents: 6,043,761 to Burrell, IV, 6,184,803 to Burrell, IV and 6,232,892 to Burrell, IV.

Enclosed in **REPLY** filed on August 21, 2002 was a separate **Information Disclosure Statement** from the office of Ezra Sutton, Esq. and also Form PTO-

1449 listing these prior art references. Pursuant to Section 609 of the M.P.E.P., after these references are considered by the Examiner, please return to the undersigned attorney a copy of Form PTO-1449 with the Examiner's initials thereon, indicating that these references have been considered by the Examiner.

In addition, all these prior art US patents except 4,831,218 to Wright have already been reviewed in the prior art US patent 5,993,089 to Burrell, IV. 5,993,089 to Burrell, IV 6,043,761 to Burrell, IV, 6,184,803 to Burrell, IV and 6,232,892 to Burrell, IV have not been reviewed in the pending patent application. It is now well known that the applicant's past claims in US patent 5,993,089 and pending claims distinguish over all relevant prior art.

### ***Claim Rejections - 35 USC § 102***

2. The pending patent application **VIRTUAL KEYBOARD AND CONTROL MEANS** "invention" is an improvement on an invention the applicant, James W. Burrell, IV, received Nov.30, 1999 in US patent 5,993,089 entitled: **8-BIT BINARY CODE FOR USE AS AN 8-DOT BRAILLE ARRANGEMENT AND DATA ENTRY SYSTEM AND METHOD FOR 8-KEY CHORDIC BINARY KEYBOARDS**. The eight-bit binary code arrangement of US patent 5,993,089 to Burrell, IV has been changed and improved in the pending patent application **VIRTUAL KEYBOARD AND CONTROL MEANS**, wherein 28 assigned eight-bit data bytes, of a possible 255 eight-bit data byte code, have been reassigned different eight-bit binary code representation. The pending patent application

**VIRTUAL KEYBOARD AND CONTROL MEANS** also does not have the same limitations as the eight-bit binary code arrangement disclosed in US patent 5,993,089. The applicant, James W. Burrell, IV, changed the eight-bit code found in US patent 5,993,089 to Burrell, IV as he was developing tutorial web pages for his website deafandblind.com. Deafandblind.com/type/demo file and deafandblind.com/fingerbraille/demo was created more than one year prior to the date of application for a patent in the United States and was downloaded onto the Internet starting in May 2002, which is less than one year prior to the date of application for a patent in the United States. Therefore the pending patent application was not patented or described in a printed publication or on the Internet in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of this application for a patent in the United States. Accidentally the inventor failed to include the correction to the pending patent application's eight-bit binary code wherein the multiplication symbol and the subtraction symbol were switched places. Along with this **REPLY** filed on August 21, 2002, an **Amendment** with a correction to the specification and corrected amended drawings wherein the multiplication symbol "x" and the subtraction symbol "-" were switched places and the < is replaced with the ◀ and the > is replaced with the ▶.

***Claim Rejections - 35 USC § 103***

3. The invention found in the pending patent application **VIRTUAL KEYBOARD AND CONTROL MEANS** was not identically disclosed, patented or described in a printed publication or Internet accessible website in this country or a foreign country or in public use or on sale in this country or a foreign country, more than one year prior to the date of this application for patent in the United States. The eight-bit binary code found in US patent 5,993,089 to Burrell, IV is different than the improved eight-bit binary code found in the pending patent application. The pending patent application has twenty-eight data assignments changed, more than ten percent, of the possible 255 data assignments in the eight-bit binary code found in US patent 5,993,089 to Burrell, IV. The monetary Euro symbol € did not exist when US patent 5,993,089 to Burrell, IV was filed. The original parent patent application of US patent 5,993,089 to Burrell, IV was written and filed on February 3, 1992 by Richard Woodbridge of then Mathews, Woodbridge & Collins in Princeton, NJ. The US Patent Office stated in a Reply that only a copyright could be obtained on the invention and rejected the patent application. James W. Burrell, IV proceeded to file and obtain a copyright on his eight-bit binary code invention. On February 3, 1997 James W. Burrell, IV re-filed the original patent application written and filed on February 3, 1992 by Mathews, Woodbridge & Collins. In an a second attempt to obtain a patent on his invention, James W. Burrell, IV had to amend the original patent application many times until finally the patent was allowed.

4. The differences between the subject matter found in the pending patent application and the prior art subject matter in dispute found in US patent 5,993,089 to Burrell, IV as a whole does not have the same limitations as the present patent application and would not have been obvious at the time the invention was made to a person having ordinary skill in the art. The differences are:

(a) The eight-bit binary code found in US patent 5,993,089 to Burrell, IV has been reassigned 28 different eight-bit data bytes, of a possible 255 in an eight-bit binary code:

- (1) The numeric value 3 was changed from the \* data character to the ¢ data character.
- (2) The numeric value 13 was changed from the NAK data character to the “ data character.
- (3) The numeric value 35 was changed from the f data character to the € data character.
- (4) The numeric value 51 was changed from the □ data character to the £ data character.
- (5) The numeric value 61 was changed from the RS data character to the ■ data character.
- (6) The numeric value 103 was changed from the á data character to the à data character.
- (7) The numeric value 105 was changed from the ú data character to the ù data character.

- (8) The numeric value 107 was changed from the é data character to the è data character.
- (9) The numeric value 109 was changed from the í data character to the ì data character.
- (10) The numeric value 110 was changed from the ó data character to the ò data character.
- (11) The numeric value 118 was changed from the void 1 to the NAK data character.
- (12) The numeric value 122 was changed from the void 3 to the SYN data character.
- (13) The numeric value 123 was changed from the É data character to the void data character.
- (14) The numeric value 131 was changed from the void 4 to the đ data character.
- (15) The numeric value 147 was changed from the ESC data character to the Pts data character.
- (16) The numeric value 149 was changed from the void 5 to the DLE data character.
- (17) The numeric value 165 was changed from the SYN data character to the \* data character.
- (18) The numeric value 179 was changed from the FS data character to the Cruzeiro □ data character.
- (19) The numeric value 181 was changed from the void 6 to the FS data character.

(20) The numeric value 199 was changed from the à data character to the á data character.

(21) The numeric value 201 was changed from the ù data character to the ú data character.

(22) The numeric value 202 was changed from the void 9 to the RS data character.

(23) The numeric value 203 was changed from the è data character to the é data character.

(24) The numeric value 205 was changed from the ì data character to the í data character.

(25) The numeric value 206 was changed from the ò data character to the ó data character.

(26) The numeric value 211 was changed from the ■ data character to the ▣ data character.

(27) The numeric value 251 was changed from the × data character to the - data character.

(28) The numeric value 252 was changed from the - data character to the × data character.

(b) US patent 5,993,089 to Burrell, IV does not have the monetary currency symbol Euro € and the present patent application does have the monetary currency symbol Euro € incorporated into the virtual keyboard invention. At the time of the original patent application of US patent 5,993,089 to James W. Burrell, IV, which was written and filed on February 3, 1992 by Richard

Woodbridge of then Mathews, Woodbridge & Collins in Princeton, NJ, the Euro € was not used as a currency standard.

(c) US patent 5,993,089 to Burrell, IV does not have the monetary currency symbol Cruzeiro and the present patent application does have the monetary currency symbol Cruzeiro incorporated into the virtual keyboard invention.

(d) US patent 5,993,089 to Burrell, IV does not have the monetary currency ₡ symbol and the present patent application does have the monetary currency ₡ symbol incorporated into the virtual keyboard invention.

(e) US patent 5,993,089 to Burrell, IV does not have the monetary symbol Lira £ and the present patent application does have the monetary symbol Lira £ incorporated into the virtual keyboard invention.

(f) US patent 5,993,089 to Burrell, IV does not have the monetary symbol Peseta ₡ and the present patent application does have the monetary symbol Peseta ₡ incorporated into the virtual keyboard invention.

(g) US patent 5,993,089 to Burrell, IV does not have the monetary symbol Sheqel ₪ and the present patent application does have the monetary symbol Sheqel ₪ incorporated into the virtual keyboard invention.

(h) US patent 5,993,089 to Burrell, IV does not have the monetary symbol Dong ₪ and the present patent application does have the monetary symbol Dong ₪ incorporated into the virtual keyboard invention.

(i) US patent 5,993,089 to Burrell, IV does not have the open quote “ and closed quote ” symbols and the present patent application does have the open



quote “ and closed quote ” symbols incorporated into the virtual keyboard invention.

(j) US patent 5,993,089 to Burrell, IV has eleven unused bytes (voids) and the present patent application has only six unused bytes (voids) incorporated into the virtual keyboard invention.

(k) The present patent application has changed accented vowel representation.

(l) US patent 5,993,089 to Burrell, IV shows, explains and claims an only eight-bit binary code used as a data entry system on eight sensor keyboards, in which a one handed user could not use, and the pending patent application shows, explains and claims a first four bit code combined with a second for bit code to produce an eight-bit binary code read from left to right on at least eight sensors. The ASCII computer code is a seven bit binary code and the extended ASCII computer code is also a seven bit binary code.

(m) In FIG. 6 of US patent 5,993,089 to Burrell, IV also shows, explains and claims an eight-bit binary code used as a standard 8-dot Braille cell arrangement using tactile separators between each cell for tactile feedback positioning and the pending patent application shows in FIG. 4A, 4B and 4C and explains a first four bit tactile code combined with a second for bit tactile code without the use of tactile separators between each cell to produce an eight-bit binary code read from left to right on at least eight sensors. The inclusion of an unused smaller dot combined with the used larger dot allows for tactile feedback

positioning without the use of tactile separators between each cell when at least one unused bit from either a first four bit code or a second four bit code is used.

(n) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to move in a first direction or by activating a right sensor to move in a second direction. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move in a first direction or by activating a right sensor to move in a second direction.

(o) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to move to the left or by activating a right sensor to move to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move to the left or by activating a right sensor to move to the right.

(p) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to rotate to the left or by activating a right sensor to rotate to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to rotate to the left or by activating a right sensor to rotate to the right.

(q) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to move backward or by activating a right sensor to move forward. The virtual keyboard found in the

pending patent application does have two directional movement controlled by activating a left sensor to move backward or by activating a right sensor to move forward.

(r) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to move down or by activating a right sensor to move up. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move down or by activating a right sensor to move up.

(s) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor and a right sensor to move forward, then deactivating a left sensor and a right sensor and then activating a left sensor and a right sensor to move backward. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor and a right sensor to move forward, then deactivating a left sensor and a right sensor and then activating a left sensor and a right sensor to move backward.

(t) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to move a cursor to the left or by activating a right sensor to move a cursor to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move a cursor to the left or by activating a right sensor to move a cursor to the right.

(u) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor to delete data to the left of a cursor or by activating a right sensor to delete data to the right of a cursor. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to delete data to the left of a cursor or by activating a right sensor to delete data to the right of a cursor.

(v) US patent 5,993,089 to Burrell, IV does not have two directional movement controlled by activating a left sensor reverses the last change or by activating a right sensor to reverse the last undo. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor reverses the last change or by activating a right sensor to reverse the last undo.

(w) US patent 5,993,089 to Burrell, IV does not have a method of shifting into a second mode by entering at least one data character. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering at least one data character.

(x) US patent 5,993,089 to Burrell, IV does not have a method of shifting into a second mode by entering the language code. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering the language code

(y) US patent 5,993,089 to Burrell, IV does not have a method of shifting into a second mode by entering the country code. The virtual keyboard found in

the pending patent application does have a method of shifting into a second mode by entering the country code

(z) US patent 5,993,089 to Burrell, IV does not have a method of shifting into a second mode by entering the country's area code. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering the country's area code

While the inventor, James W. Burrell, IV, was writing the present patent application he learned to program web pages. Burrell, IV realized that he needed 256 pictures of two hands to teach his method of "fingerbraille" communication for the deaf-blind, his multilingual computer compatible eight dot braille arrangement and his method of blind chordic typing using only eight sensors. 256 pictures of left and right hand finger combinations requires more than twice the picture download time than two individual hand pictures would. Burrell, IV decided on using 16 left hand pictures and 16 right hand pictures, which means only 32 pictures are needed and could be stored in the computers buffer. This is not shown, disclosed or claimed in the limitations of US patent 5,993,089 to Burrell, IV, but is shown, disclosed and claimed, in the present patent application, as a first four bit code combined with a second four bit code.

The rejection of Claims 1-35 under 35 U.S.C 102(b) as anticipated by or, in the alternative, under U.S.C. 103(a) as being obvious over US patent 5,993,089 to Burrell, IV, is respectfully traversed. The present patent application does not have the same limitations of US patent 5,993,089 to Burrell, IV.

With respect to Claims 1, 3, 19 and 20 in the present patent application, Burrell teaches in Claim 1:

An eight bit code read from left to right on at least eight sensors comprising:

a first four bit code combined with a second four bit code to produce data.

In US patent 5,993,089 to Burrell, IV, Burrell teaches:

An eight bit binary code used as a data entry system for a binary eight key or sensor chordic keyboard consisting of:

a first set of four binary sensors for use by four digits of a first hand group; and, means for producing a vowel whenever at least one of said four binary sensors of said first set of four binary sensors is activated by a digit of said first hand group, combined with an unused second set of four binary sensors for a second hand group.

The limitations of US patent 5,993,089 to Burrell, IV requires an eight binary code, which is not read from left to right, used as a data entry system on a binary eight key or sensor chordic keyboard. The ASCII computer code is a seven bit binary code read from right to left on eight sensors and requires 128 pictures to represent data. The present patent application is teaching, disclosing

and claiming an eight bit code read from left to right on at least eight sensors wherein a first four bit code is combined with a second four bit code to produce data. This technique allows for the use of only 32 pictures to represent data. The limitations of US patent 5,993,089 to Burrell, IV requires 256 pictures to represent data.

With respect to Claims 3 and 4 in the present patent application, Burrell teaches:

3. A method of producing data using an eight bit code read from left to right on at least eight sensors comprising the step of:

activating at least one sensor to enter an eight sensor data entry mode.

4. A method of producing data using an eight bit code read from left to right on at least eight sensors, in accordance with claim 3, comprising the step of:

activating at least one said sensor of said eight sensors to enter an eight sensor data entry mode.

The present patent application is teaching, disclosing and claiming a method of producing data using an eight bit code read from left to right on at least eight sensors wherein activating at least one sensor on a split space bar keyboard, touch screen panel, or any apparatus used for producing data, will enter an eight sensor data entry mode, or by activating at least one sensor on the eight sensors used for producing data.

With respect to Claim 19 in the present patent application, Burrell teaches:

An apparatus for entering an eight bit code read from left to right on at least eight sensors wherein:

- a) a first left bit has the numeric value of one and is a left digit sensor, and
- b) a second bit has the numeric value of two and is a left digit sensor, and
- c) a third bit has the numeric value of four and is a left digit sensor, and
- d) a fourth bit has the numeric value of eight and is a left digit sensor, and
- e) a fifth bit has the numeric value of sixteen and is a right digit sensor, and
- f) a sixth bit has the numeric value of thirty-two and is a right digit sensor,  
and
- g) a seventh bit has the numeric value of sixty-four and is a right digit sensor,  
and
- h) an eighth right bit has the numeric value of one hundred and twenty-eight  
and is a right digit sensor.

The limitations of US patent 5,993,089 to Burrell, IV requires an eight binary code, which is not read from left to right, used as a data entry system on a binary eight key or sensor chordic keyboard. The present patent application is teaching, disclosing and claiming an eight bit code read from left to right on at least eight sensors wherein a first four bit code is combined with a second four bit code to produce data. US patent 5,993,089 to Burrell, IV does not disclose or teach an apparatus for entering an eight bit code read from left to right on at least eight sensors and the left to right scan codes required to produce data electronically through a computer keyboard



With respect to Claim 20 in the present patent application, Burrell teaches:

A method of entering an eight bit code read from left to right on at least eight sensors comprising the step of:

- a) activating one said left digit sensor moves an object in a first direction, and
- b) activating one said right digit sensor moves said object in a second opposite direction.

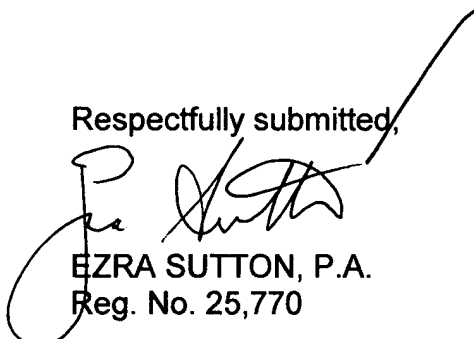
The limitations of US patent 5,993,089 to Burrell, IV does not teach, disclose or claim activation of a first sensor to move an object in a first direction and activating a second sensor to move an object in a second opposite direction.

In reference to the rejection as obvious over US patent 4,831,218 to Wright, Wright teaches, shows and claims a  $4 \times 4$  matrix of keys allowing the generation of data. The limitations of Wright's patent does not disclose, teach or claim any type of eight bit binary code which is disclosed and claimed in US patent 5,993,089 to Burrell, IV. The limitations of Wright's patent does not disclose, teach or claim a first four bit binary code combined with a second four bit binary code, which is disclosed, taught and claimed in the present patent application.

The prior art references of US patent 4,831,218 to Wright and US patent 5,993,089 to Burrell, IV, even in combination, does not teach, disclose or claim the elements and features found in the present patent application.

The present patent pending invention was not identically disclosed, patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of this application for patent in the United States. The differences between the improved eight-bit code found in the pending patent application and US patent 5,993,089 to James W. Burrell, IV would not have been obvious at the time the invention was made to any person having ordinary skill in the art. The many uses of the virtual chordic keyboard and its many embodiments in the present patent application would not have been obvious at the time the invention was made to any person having ordinary skill in the art. Therefore, none of the rejections are valid, the claims of the present patent application are patentable and should be allowed.

Respectfully submitted,



EZRA SUTTON, P.A.  
Reg. No. 25,770

Plaza 9, 900 Route 9  
Woodbridge, New Jersey 07095  
(732) 634-3520  
ES/jb